

Serial No. 09/648,044
Docket No. MIO 0054 PA

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Remarks

In the Office Action mailed May 3, 2006, the Examiner finally rejected claim 45 under 35 U.S.C. 102(e) as anticipated by Kusunoki et al (US 5,369,297). Claims 1, 3 and 5-7 are finally rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kusunoki et al. Claims 2, 4, 8-9, 46-53 and 55-56 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over Kusunoki et al in view of Akram. Claims 10 and 54 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over Kusunoki et al in view of Admitted Prior Art (APA). Claims 11-12, 14 and 57 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over Kusunoki et al in view of Motoyoshi et al (JP 6-53492). Claim 13 is finally rejected under 35 U.S.C. 103(a) as being unpatentable over Kusunoki et al and Motoyoshi et al, as applied to claim 12, and further in view of Akram. The applicants respectfully traverse these rejections.

In a request for reconsideration filed 30 June 2006, we disagreed with the Examiner that Kusunoki et al. anticipate or make obvious (individually or in combination with the other cited art) the recited invention of the claims. We maintain that Kusunoki et al. fail to teach or suggest a gate formed on a portion of an oxide layer, where a portion of the oxide layer underneath the gate has an ion concentration higher than a remaining second portion under the gate and all other portions of the oxide not covered by the gate. All the embodiments of Kusunoki et al. having a single nitrated oxide portion, which is indicated by symbol 5 in FIGS. 1, 7, 12, 18, and 22, have the gate on the entire oxide layer, and not on a portion thereof. There is no suggestion to the contrary provided by Kusunoki et al. However, in an effort to place this application in a condition for allowance, the independent claims have been amended to positively recite that "the gate oxide layer extends outwardly from both sides of the gate electrode, wherein a portion of the gate oxide is located only beneath the gate electrode," as suggested by the Examiner in the advisory action.

Independent claim 1 now recites the limitation, *inter alia*, "a gate structure formed on a portion of said oxide layer and having first and second leading edges, said oxide layer extends outwardly from both said leading edges of said gate structure." (Emphasis added). Independent claim 3 now recites the limitation, *inter alia*, "a gate electrode located on said gate oxide layer above said channel region, said gate oxide layer extends outwardly from both sides of said gate


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electrode, wherein portions of said gate oxide layer located only under said gate electrode include a first overlap region and a second overlap region." (Emphasis added). Independent claim 12 now recites the limitation, *inter alia*, "a gate electrode located on said gate oxide layer above said channel region, said gate oxide layer extends outwardly from both sides of said gate electrode, wherein portions of said gate oxide layer located only under said gate electrode include a first overlap region and a second overlap region." (Emphasis added). Independent claim 45 now recites the limitation, *inter alia*, "a gate electrode located on a portion of said gate oxide layer above said channel region, said gate oxide layer extends outwardly from both sides of said gate electrode, wherein the portion of said gate oxide layer located only beneath said gate electrode has first and second portions." (Emphasis added). Independent claim 47 now recites the limitation, *inter alia*, "a gate electrode located on said gate oxide layer above said channel region, said gate oxide layer extends outwardly from both sides of said gate electrode, wherein portions of said gate oxide layer located only beneath said gate electrode include a first portion and a second portion." (Emphasis added). In view of the above amendments, Kusunoki et al. fails to disclose and/or suggest each and every limitation of the claims.

For all of the above reasons, applicants submit that the pending claims are patentable over the prior art of record and are in condition for allowance. Early notification of allowable subject matter is respectfully solicited.

Respectfully submitted,
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